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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/737,296      | 12/16/2003  | Sung Ho Bae          | CU-3483 RJS/WWP     | 7676             |

26530 7590 02/10/2006

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CHICAGO, IL 60604

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| EXAMINER |
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FARROKH, HASHEM

|          |              |
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| ART UNIT | PAPER NUMBER |
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2187

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/737,296

Applicant(s)

BAE, SUNG HO

Examiner

Hashem Farrokh

Art Unit

2187

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-7 and 9-20 is/are allowed.
- 6) ☒ Claim(s) 1-3, 8 and 31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

*The instant application having application No. 10/737,296 has a total of 31 claims pending in the application; there are 6 independent claims and 25 dependent claims, all of which are ready for examination by the examiner.*

**INFORMATION CONCERNING CLAIMS:**

***Claim Rejections - 35 USC § 112***

*The following is a quotation of the second paragraph of 35 U.S.C. 112:*

*The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.*

1. *Claim 1 recites the limitation "the burst length" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim.*
2. *Claim 8 recites the limitation "the DQS buffer" in line 13. There is insufficient antecedent basis for this limitation in the claim.*
3. *Claim 31 recites the limitation "the write command decoder" in line 17. There is insufficient antecedent basis for this limitation in the claim.*

**ALLOWABLE SUBJECT MATTER**

*Claims 4-7, 9, and 10-31 are allowed.*

*Claims 1-3, 8, and 31 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.*

1. *The primary reason for allowance of claims 1-3 in instant application is the combination with the inclusion of following limitations: determining a point in time at which the burst length of the data ends and controlling the operations of the DQS buffer to enable or disable the generation of the first and second signals after determining the point in time at which the burst length of the data ends.*
2. *The primary reason for allowance of claims 4-7 in instant application is the combination with the inclusion of following limitations: means for controlling the operations of the DQS buffer based on a determined point in time, wherein the determined pointed in time is the point in time at which the burst length ends after receiving a write command.*
3. *The primary reason for allowance of claim 8 in instant application is the combination with the inclusion of following limitations: means for generating a control signal which determines an end point in time of a burst length to disable the operation of the DQS buffer based on the determined point in the time and normally recovers the operation of the DQS buffer after the elapse of a predetermined time*
4. *The primary reason for allowance of claim 9 in instant application is the combination with the inclusion of following limitations: determining a point in time at which the burst length ends; disabling the DQS buffer in response to a first burst signal enabled in a burst mode operation*

5. The primary reason for allowance of claims 10-23 in instant application is the combination with the inclusion of following limitations: means (300, 310, 320, 340, 350) for disabling the DQS buffer for a mask time (dsb) after accessing all data bursts, wherein the mask time (dsb) is calculated based on at least the second access signal (dsft2) and the data burst length

6. The primary reason for allowance of claims 24-31 in instant application is the combination with the inclusion of following limitations: wherein the mask time (dsb) is calculated based on at least the last pulse of the already generated second access signal (dsft2) and the data burst length (n), and further wherein the calculated mask time sufficiently includes the duration of time in which a ringing is present in the DQS signal

**: IMPORTANT NOTE :**

If the applicant should choose to rewrite the independent claims to include the limitations recited in either one of the claims, the applicant is encouraged to **amend the title of the invention** such that it is descriptive of the invention as claimed as required by sec. 606.01 of the MPEP. Furthermore, the **summary of invention** and the **abstract** should be amended to bring them into harmony with the allowed claims as required by paragraph 2 of sec. 1302.01 of the MPEP.

As allowable subject matter has been indicated, applicant's response must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 C.F.R. § 1.111(b) and § 707.07(a) of the M.P.E.P.

### **Conclusion**

*The prior art made of record and not relied upon are as follows:*

1. *U. S. Patent Publication No. 2004/0268028 A1 to Lee describes Method and apparatus for masking postamble ringing phenomenon in DDR SDRAM.*
2. *U. S. Patent Publication No. 2004/0052151 A1 to Jacobs et al. describes Method and apparatus for improving noise immunity in a DDR SDRAM system.*
3. *U. S. Patent No. 6,560,669 to Ryan describes Double data rate synchronous memory with block-write.*
5. *U. S. Patent No. 6,134,179 A to Ooishi describes Synchronous semiconductor memory device capable of high speed reading and writing.*
3. *Korean Patent Publication No. KR 2005/002521 A to MOON describes Method for masking postamble ringing in DDR SDRAM, especially including ringing blocking unit.*

*Any inquiry concerning this communication should be directed to Hashem Farrokh whose telephone number is (571) 272-4193. The examiner can normally be reached Monday-Friday from **8:00 AM to 5:00 PM**.*

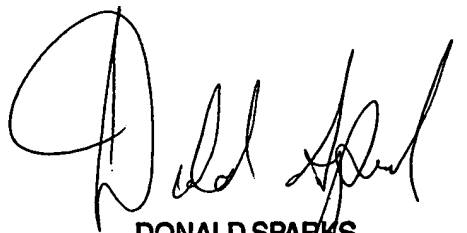
*If attempt to reach the above noted Examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Donald A Sparks, can be reached on (571) 272-4201. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information*

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*about PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBS) at 866-217-9197 (toll-free).*

HP  
HF

2006-02-05



**DONALD SPARKS**  
**SUPERVISORY PATENT EXAMINER**